



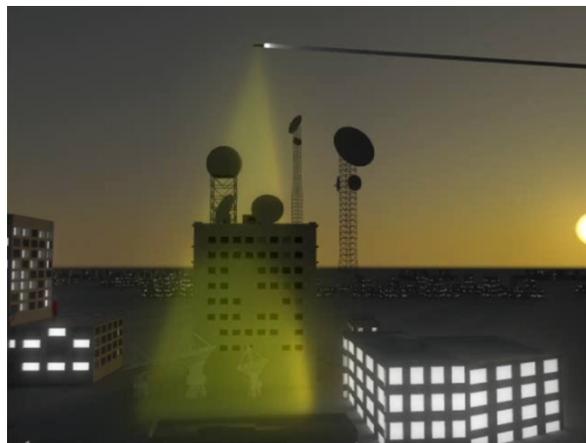
## AFRL Directed Energy Directorate High Power Electromagnetics

### CHAMP System

The Counter-electronics High Power Microwave Advanced Missile Project (CHAMP) is an unmanned system capable of flying into a contested area and disabling an adversary's electronic systems. It employs a high power radio frequency technology, which was developed over the past two decades in the Air Force Research Laboratory and tested through a Joint Capability Technology Demonstration (JCTD) program.

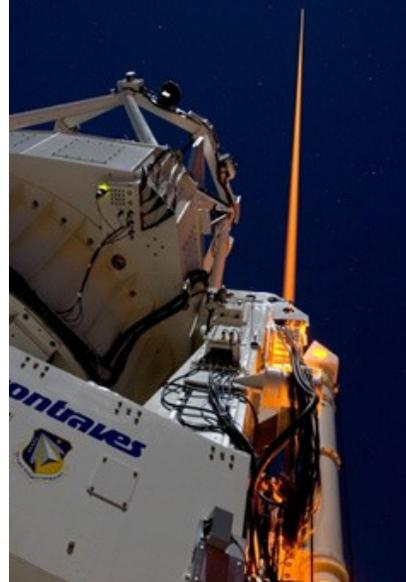
CHAMP offers a proven capability that allows the Air Force to defeat electronic systems in an enemy structure without employing kinetic weapons like bullets or explosives. As such, CHAMP completely avoids damage to infrastructure and danger to life.

The CHAMP system is highly adaptable and can be deployed from a variety of platforms, depending on mission needs.

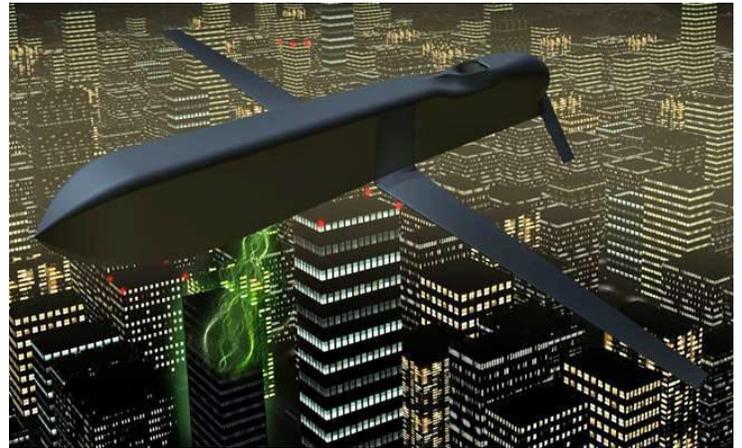


Directed  
Energy  
Directorate

Speed of  
Light to the  
Fight by 2020



Possible avenues for a CHAMP acquisition strategy are being considered, though no clear path has been provided. In the meantime, AFRL is continuing its efforts to hone the CHAMP capability, working towards improving the size, weight, and power. Though there are no planned demos of HPM systems in the near future, AFRL is deeply engaged in advancing the technology to enable the next generation of HPM-based weapon systems.



### **Active Denial System (ADS)**

In addition to CHAMP, AFRL matured another non-lethal HPM technology in the last decade—the Active Denial System.

As proven during its Advanced Technology Demonstration program, ADS is a long-range, speed-of-light beam that causes intense pain to targeted individuals without resulting in any temporary or permanent physical damage. AFRL has transitioned this technology to the Joint Non-Lethal Weapons Directorate and showcased it to a host of potential customers, including Homeland Security.



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